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THE ECONOMICS OF LIBRARY ARCHITECTURE

By C. W. Andrews

The John Crerar Library, Chicago

There are several reasons why I have not complied with the request of the President to prepare this paper for advance printing. Perhaps the most important is that through an unforeseen coincidence I have been too busy in applying the principles it enunciates to the concrete example of plans for a proposed building for The John Crerar Library; a second is the hope that the faults inevitable in the presentation of a subject for the first time may be less evident; and a third is that the discussion on it is likely to be limited. For the interest in this subject is confined chiefly to those about to build, since the advantages and disadvantages of existing buildings are nearly unalterable and must be accepted by most librarians as inevitable.

I hope, however, that the subject will have at least the attraction of novelty. Mr. Soule has given us an admirable guide in the planning of library buildings and Mr. Jennings has recently summed up very accurately the modern tendencies in library architecture but neither has treated the subject distinctly from the economic standpoint. Mr. Ranck has done this for some details but so far as I know there has been no comprehensive presentation of the subject.

Perhaps the complexity and variability of the conditions affecting it has prevented this; for they are complex and varied to a bewildering degree. All that will be attempted in this paper is an enumeration of the most important of these conditions and some indications as to how they support or oppose each other, leaving those interested to give the proper weight to each in its application to any particular case.

A comprehensive survey must take into account not only the direct expenditure of money by the library both for the construction of the building and for its proper

maintenance after construction; the expenditure of time by the staff which is of course an expenditure of money by the library; of effort by the staff, which is in most cases time and therefore money to the library; and also the expenditure of time and effort by the readers, which is not only money to them but to the library also by reducing its usefulness and the economic return on a given expenditure.

These economic considerations apply to nearly every line of the library's service; to its circulating department, to its general and special reference work, to its routine of cataloging and classification; to the care of readers and staff; to its systems of lighting, heating, and ventilation. Indeed it would be difficult to mention a single item of library work whose results are not affected by the planning of the library building.

And yet it is not the variety of the functions which have to be provided for in a modern library building which makes satisfactory provision for them so difficult and has prevented even an approach to uniformity in the plans. It is rather that the relative importance of these functions vary greatly in different libraries and, to larger degree than might appear on first thought, in the same library at different times in its development, and perhaps still more it is the fact that the financial conditions under which the larger libraries are built are never identical.

Turning now to the consideration of details, the first question to be decided is that of size or of time for which provision shall be made. Here the dilemma is obvious, and a compromise must be found that will give room for growth for a considerable time and yet not lock up too much money in unused building. No other solution is possible for even if a Globe-Wernicke style of architecture could be evolved it would

still remain true that this method, like the book-cases, would be much more expensive than the conventional one. It may not be known to you that architects figure that the construction of a building in two portions would add at least ten per cent. to the total cost. On the whole, however, it would appear that fewer errors are made in this respect than in others. And yet one large library was forced to rent room for some of its work outside its new building within ten years, because of the growth of its collections, an item comparatively easily calculated.

The ground plan of the building is less likely to be considered from the economic standpoint. Perhaps it would be more accurate to say that the changes in the economic conditions affecting it are more likely to be overlooked. When libraries were used chiefly or solely in the day time or when the use of artificial light had to be minimized, either because of its injurious effect on the books or because of its cost, then the ground plan was naturally chosen to secure the maximum of daylight in all parts of the building. These plans have been followed long after the conditions indicating them have ceased to exist. This, however, is becoming less and less true and Mr. Jennings has pointed out the strong tendency toward the solid rectangle advocated by Dr. Dewey years ago.

A comparison of the economic advantages and disadvantages of the different ground plans may be of interest. Perhaps the oldest is the hollow square. It is very common in Europe but the Boston Public Library is the only conspicuous example in this country. It furnishes the maximum of well lighted space for a given area, but as it has eight façades instead of four it is the most expensive to build, maintain, and heat. Still worse, it gives the maximum dislocation of readers, books and staff. It has been said that the farthest book on the regular shelves of the Chicago Public Library is nearer the delivery desk than the nearest of the Boston Public Library and it is evident that in the most unfavorable cases the supply of a reader

and the return of the book to the shelves may involve a combined journey of book and reader more than twice around the building.

Another ground plan, exemplified in the Columbia Library and in some other university libraries, is the Greek cross. This is even more expensive to build than the hollow square and dislocates the work of the library fully as much and the storage of the books even more, requiring therefore a proportionately larger staff. Its only economic justification would appear to be the need of a large number of seminar rooms in close connection with the stack, but Harvard, with a much larger library, and California, with a smaller one, have met this need in connection with a solid stack.

A less expensive plan is a Greek cross inside a hollow square as in the Library of Congress, and with very short arms as in the British Museum. I understand that the New York Public Library will when extended, also have this plan. Here the open spaces are not large enough to require elaborate treatment, and the cost is proportionately less as is also the loss of heat and cost of heating. The passages through the arms greatly facilitate the movements of readers and staff and the storage of books can be made convenient or even central to the delivery desk.

The same advantages apply to a larger degree to the rectangle with one or more light wells. In its present form the New York Public Library has such a plan. If these wells light space required for other functions than storage they are justified, but not for this purpose alone. It is evident that they absorb space which would otherwise be available for storage but it is not so evident that their cost is in itself a burden. Yet it may be said on good authority that the interest on the extra cost of the wells would pay for lighting the stacks by electricity all the time the library is open three or four times over.

Finally there is the solid rectangle, illustrated in the New York state library, though it is true that the plan is modified

by its relation to the rest of the Education building. Here there is the minimum of initial cost, the maximum of compactness and accessibility of storage, and with a suitable arrangement of the rooms, a minimum of maintenance expense.

After size and plan the next factor, logically, is the height, especially the height of the different floors. It is now generally recognized that floors in contact with stacks should be on a level with every second or third stack floor in order to facilitate service and that too low ceilings cause loss of efficiency in the staff through imperfect ventilation while too high rooms, besides wasting space, are more expensive to light and heat.

The arrangement and juxtaposition of the rooms is, however, a more important matter. Errors in this may affect very seriously the number and the grade of assistants required and thus increase the maintenance charge. The number and relative position of the reading rooms is a notable instance. Some division is necessary. For obvious reasons a medical department should have a separate reading room. Many libraries find it advantageous to provide a separate service for their technical collection and most do so for current periodicals. All such divisions, however, are costly and should not be made without due consideration. The experience of the Newberry Library on this point is enlightening. Its original plan provided for a series of departmental reading rooms, each containing the books on its subject and served by attendants having expert knowledge of that subject. From time to time this system has been curtailed and now it is understood that the trustees have under serious consideration a radical change in the establishment of one central reading room. The reasons for the proposed change are exactly those just mentioned—better service to the readers at less cost.

Except that the salaries involved are smaller the same is true of the arrangement of the stacks. One which disperses the books so as to require more attendants

than the minimum number for the average service is to the extent that it does this uneconomical.

Under this head falls also an item which may be of considerable influence on the cost of the building and on its maintenance charge. This is the space assigned to halls and corridors. These should give ready and ample access to such rooms as require separate access, but anything more, at least in a northern climate, is wholly an evil. That the maintenance charge of the New York Public Library is increased considerably by the extent of the halls and corridors is evident to any one who has been in the building. That the loss of time to readers and staff is also considerable is equally certain, though perhaps not so obvious.

In the minor matters of library economy the economical effect of the plan may be conflicting or even reversed. Thus a poorly planned building will permit less work on the part of readers and staff and so diminish the demand for library supplies and perhaps for artificial light. And a compact building of low initial cost and very economical in the more important ways mentioned will of necessity make a large demand for artificial light.

This is not true, however, of the provision for ventilation. Here the usual practice has been to provide a general system capable of renewing the air sufficiently for the maximum demand for all the building and requiring to be run at the same rate and nearly the same cost to do this for any part. This is manifestly uneconomical, for the needs of different parts of the building vary greatly both as to quantity and duration. A system which would permit the frequent renewal of air in the reading rooms, a less frequent renewal in the staff and similar rooms and a still less frequent renewal in the stacks and the stoppage of the process whenever and wherever it becomes unnecessary, would avoid not only a relatively heavy maintenance charge but also the installation of a costly outfit and a not inconsiderable addition to the cost of the building in providing an elaborate system of flues.

Exactly the same may be said for the system of cleaning.

In conclusion let me refer briefly to a phase of the subject which on first thought might seem not to belong to it at all. This is the aesthetics of library architecture. Yet it is evident that the adoption of a style which is expensive to construct may impose too heavy a burden on the funds of the library, or, especially if it requires much ornamentation, increase the expense of maintenance; that one style will give more lighted space than another, etc., and on the other hand that bad architecture or an absolutely plain building in the modern factory style, will almost certainly cost the institution the respect and perhaps the good will of all who see it and

use it. In economic terms this may well mean the loss of financial support from the community, whether by taxes or in gifts, a loss of efficiency on the part of the staff through a lack of pride in the institution, and a disregard for its property and regulations on the part of the readers.

Speaking under correction as a layman, I do not think that simplicity and unity of plan are incompatible with dignity of style, beauty of design, or suitability of material.

Does not Polonius' advice fit exactly? "Costly thy habit as *thy purse can buy*, but not expressed in fancy." Would not Laertes have erred equally had he bought for his studies at the university either the full dress of a courtier or the overalls of a workman?

THE MUNICIPAL REFERENCE LIBRARY AND THE CITY LIBRARY

By Samuel H. Ranck

Grand Rapids Public Library

The first time I discussed the public library in its relation to the city government, in anything like a formal way, was at the Michigan Library Association at its annual meeting in conjunction with the League of Michigan Municipalities in Detroit in 1907. This discussion was based on our experience in certain phases of municipal reference work begun in 1905. Incidentally, the first distinctively municipal reference library—that of Baltimore—was organized in 1907.

At the Bretton Woods meeting of the A. L. A. in 1909 I read a paper on this subject, emphasizing the following points:

"1. A municipal reference library on a limited scale is worth while for most of our cities, both for the city officers and for the citizens.

"2. In most of our cities I believe it can best be handled and managed by being made a part of the public library rather than by the building up of a second, separate, and independent organization.

"3. There must be close personal touch and sympathy between the person managing such a department and the various of-

ficials of the city government. The efficiency of a municipal reference library can easily be 'queered' by the librarian in charge taking the wrong personal attitude in his dealings with people.

"4. We should look forward, finally, to a central bureau to supply certain classes of information for all the cities of the country."

These facts are mentioned here to avoid the necessity of a discussion of points given in papers already published.

In all work of a municipal reference library two functions should be clearly recognized; one to make available to the general public—citizens, if you please—the latest and best information on municipal problems of all kinds; and the other to make such information available to those in authority, the representatives of the city government—city officials or employees of the city. To serve this latter class the best service can, as a rule, be given only when the library has quarters in the city hall—near and convenient for the users of such information.

It is generally acknowledged that so far